

REMARKS/ARGUMENTS:

Claims 24 and 25 are canceled without prejudice. Claims 18, 20, 21, 23, 26-34, and 36-38 are amended. Support for the amendment to claim 18 can be found in original claim 25. Claims 18, 20, 21, 23, 26-34, and 36-38 are pending in the application. Reexamination and reconsideration of the application, as amended, are respectfully requested.

INTERVIEW SUMMARY:

On October 13, 2010, Patent Agent Barry Shuman conducted a telephone interview with Examiner Seyed Masoud Malekzadeh and Supervisory Patent Examiner Joseph S. Del Sole. During the interview the parties discussed the Office Action dated June 22, 2010. Specifically, proposed amendments to claims 18 and 29 were presented and the references Lovejoy (U.S. Patent No. 3,905,740) and Sakaguchi et al. (JP 10-182285) were discussed. The Examiners agreed that the proposed amendment to claim 18 would overcome Lovejoy and the proposed amendment to claim 29 would overcome Sakaguchi.

Applicant would like to thank Examiner Seyed Masoud Malekzadeh and Supervisor Joseph S. Del Sole for the courtesy of granting a telephone interview with Patent Agent Barry Shuman.

CLAIM REJECTIONS UNDER 35 U.S.C. §102:

Claims 18, 20, and 23 stand rejected under 35 U.S.C. §102(b) as being anticipated by Young (U.S. Patent No. 2,691,242).

Claims 18, 20, and 23 stand rejected under 35 U.S.C. §102(b) as being anticipated by Tsurumi (U.S. Patent No. 3,924,376).

CLAIM REJECTIONS UNDER 35 U.S.C. § 103:

Claims 18, 20-21, 23-34, and 36-38 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sakaguchi et al. (JP 10-182285) in view of Tsurumi.

Claims 24-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sakaguchi in view of Yamazaki et al. (U.S. Patent No. 6,136,091) and further in view of Lovejoy et al. (U.S. Patent No. 3,905,740).

The above rejections are moot with respect to claims 24 and 25 due to the cancellation of these claims. Applicant respectfully traverses these rejections as to amended claims 18, 20, 21, 23, 26-34, and 36-38. Claim 18 incorporates limitations from canceled claim 25. Claim 18, as amended, is as follows:

A mold for producing a silicon ingot, comprising:

a bottom surface member; and

a plurality of lateral surface members combining with the bottom surface member,

and each lateral surface member comprising a first engaging structure on a first lateral end thereof and a second engaging structure on a second lateral end thereof, one of the first and second engaging structures of one of the plurality of lateral surface members engages with one of the first and second engaging structures of another one of the plurality of lateral surface members,

wherein the first and second engaging structures each comprises a projection and a recess, and

wherein the plurality of lateral surface members combined with a side surface of the bottom surface member and are upright so as to surround the bottom surface member, and

the mold for producing a silicon ingot further comprising:

a mold holder configured for placing the bottom surface member and the plurality of lateral surface members that are combined;

a wedge receiver is on an upper surface of the mold holder; and

a plurality of wedge members respectively positioned in clearances between the wedged receiver and outer peripheral surfaces of the plurality of lateral surface members.

Applicant respectfully submits that the cited references cannot anticipate or render claim 18 obvious, because the cited references fail to teach or suggest "a plurality of wedge members respectively positioned in clearances between the wedged receiver and outer peripheral surfaces of the plurality of lateral surface members."

It is an aspect of the present invention that the wedge receiver 10 and each of the lateral surface members 3 can be firmly fixed to each other without loosening a joining portion between the bottom surface member 2 and the lateral surface member 3 by driving the wedge 8 between the wedge receiver 10 and the lateral surface member 3. Therefore, the leakage of a silicon melt is restrained, so that the size of the mold 1 can be increased. The necessity of subjecting the bottom surface member 2 composed of a high-cost graphite mold member to special processing for preventing the leakage of the silicon melt is eliminated, so that the rise in the cost of the mold can be restrained. (Applicant's specification at p. 33, line 25-p. 34, line 12).

The Office cites Lovejoy for supplying the above limitation. At p. 17, line 3 of the Office Action, the Office appears to indicate that Lovejoy teaches a plurality of wedge members (72, 74) that correspond to the wedge member (8) of the present invention. However, the wedge members (72, 74) of Lovejoy exist inside of the article 10 to press the melt material from the inside of the article 10 (see e.g.,

Lovejoy, Fig. 6), whereas in the present invention, the wedge member 8 is positioned between the wedge receiver (10) and the lateral surface member (3).

In light of the foregoing, Applicant respectfully submits that the cited references cannot anticipate or render claim 18 obvious, because the cited references fail to teach or suggest each and every claim limitation. Claims 20, 21, 23, 26-34, and 36-38 depend from claim 18 and therefore, cannot be anticipated or rendered obvious for at least the same reasons as claim 18. Withdrawal of these rejections is thus respectfully requested.

In addition, with respect to claim 29 (and claims dependent thereon), the Office states that Sakaguchi teaches an L-shaped notch portion 4 (Office Action, p. 8, 2nd line from bottom), and fastening bolt 5 that are the frame-shaped members (4, 5) and the frame-shaped members (4, 5) surround an outer periphery of the lateral surface members (2, 3) (Office Action, p. 12, lines 15-21). Applicant respectfully disagrees that such members (4, 5) surround the lateral members (2, 3). Furthermore, Sakaguchi fails to teach or suggest the construction of amended claim 29 wherein the frame-shaped member continuously surrounds the outer periphery of the lateral surface members.

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (310) 595-3107 to discuss the steps necessary for placing the application in condition for allowance.

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Amdt. Dated October 22, 2010
Reply to Office Action of June 22, 2010

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If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 071896.

Respectfully submitted,
DLA PIPER LLP (US).

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